

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2020/2021

BAC 2624 – MANAGEMENT ACCOUNTING II

(All Sections / Groups)

10 March 2021
9.00 am. – 12.00 pm.
(3 Hours)

INSTRUCTION TO STUDENT

1. This Question paper consists of 9 pages (excluding cover page) with 4 Questions only.
2. Answer **ALL** Questions. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

QUESTION 1**Part A**

1. Dorset Sdn Bhd manufactures three (3) products A, B and C from a common input in a joint processing operation. The cost of the joint-processing operation is as follows:

	RM
Direct Material	145,000
Direct labor	125,000
Manufacturing Overhead	80,000

The output of product A, B and C and the selling price for the product at the split-off point is as follows:

Product	Selling Price RM	Quantity of Output
A	16 per pound	50,000 pounds
B	8 per pound	30,000 pounds
C	25 per gallon	25,000 gallons

Dorset Sdn Bhd has just developed an innovative manufacturing process which enables the company to process further product A, B and C into X, Y and Z. Market survey has shown that the demand for product X, Y and Z is growing and Dorset Sdn Bhd believes that it can make better profits by processing further product A, B, and C into X, Y and Z.

50,000 pounds of product A is further processed to get 45,000 pounds of X at an additional processing cost of RM 53,000. Selling price of product X is RM 20.00 per pound.

30,000 pounds of product B is further processed to get 28,000 pounds of Y at an additional processing cost of RM 80,000. Selling price of product Y is RM 13.00 per pound.

25,000 gallons of product C is further processed to get 21,000 gallons of Z at an additional processing cost of RM 50,000. Selling price of product Z is RM 32.00 per gallon.

Sales during October 2020 for product X is 44,000 pounds, product Y is 26,000 pounds and product Z is 20,000 gallons.

(round up all decimal points to 3 decimal place).

Continued...

Required:

Compute the following using the Net Realizable Value (NRV) method:

- a) Allocation of the joint-cost to product X, Y and Z. (4.5 marks)
- b) The gross margin for product X, Y and Z (5 marks)
- c) Which product or products should be sold at the split -off point and which product or products should be processed further? Show your computation. (4.5 marks)

Part B

Home Carpets Sdn Bhd manufactures carpets and uses a standard cost system. The company allocates overhead based on the number of direct labor hours. The following are the company's cost and standard data:

Standards:

Direct Materials 22.0 yards per carpet at RM 13.00 per yard
Direct Labor 5.0 hours per carpet at RM 15.00 per hour
Variable manufacturing overhead standard rate RM 8.00 per direct labor hours
Predetermined fixed manufacturing overhead standard rate RM 6.00 per direct labor hours
Total Budgeted fixed manufacturing overhead cost RM 63,500

Actual Cost and Operating data from the month of January 2021 are as follows:

Purchased 51,260 yards at the total cost of RM 661,254.
Used 47,500 yards in producing 2,200 carpets
Actual direct labor cost of RM 168,175 for a total of 10,850 hours
Actual variable manufacturing overhead RM 93,310
Actual fixed manufacturing overhead RM 67,500

Note: All manufacturing overhead is allocated on the basis of direct labor hours.

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Required:

- a. Compute the standard cost of one carpet.
(3 marks)
- b. Calculate the following variances:
- (i) Direct material price variance
(1 mark)
 - (ii) Direct material efficiency variance
(1 mark)
 - (iii) Direct labor price variance
(1 mark)
 - (iv) Direct labor efficiency variance
(1 mark)
 - (v) Variable manufacturing overhead spending variance
(1 mark)
 - (vi) Variable manufacturing overhead efficiency variance
(1 mark)
 - (vii) Fixed overhead spending variance
(1 mark)
 - (viii) Production volume variance
(1 mark)

(Total 25 marks)

Continued...

QUESTION 2

Comm Devices (CD) is a division of Worldwide Communications. CD produces pagers and other personal communication devices. These devices are sold to other Worldwide divisions, as well as to other communication companies. CD was recently approached by the manager of Personal Communications Division regarding a request to make a special pager designed to receive signals from anywhere in the world. The Personal Communications Division has requested CD to produce 12,000 units of this special pager. The following facts are available regarding the CD Division.

	RM
Selling price of standard pager	95.00
Variable cost of standard pager	50.00
Additional variable cost of special pager	30.00

Required:

For each of the following independent situations, calculate the **minimum transfer price**, and discuss whether the internal transfer should take place or whether the Personal Communications Division should purchase the pager externally.

- a) The Personal Communications Division has offered to pay the CD Division RM105.00 per pager. The CD Division has no available capacity. The CD Division would have to forgo sales of 10,000 pagers to existing customers in order to meet the request of the Personal Communications Division. *(Note: The number of special pagers to be produced does not equal the number of existing pagers that would be forgone.)*

(6 marks)

- b) The Personal Communications Division has offered to pay the CD Division RM150.00 per pager. The CD Division has no available capacity. The CD Division would have to forgo sales of 16,000 pagers to existing customers in order to meet the request of the Personal Communications Division. *(Note: The number of special pagers to be produced does not equal the number of existing pagers that would be forgone.)*

(6 marks)

- c) The Personal Communications Division has offered to pay the CD Division RM100.00 per pager. The CD Division has available capacity.

(4 marks)

Continued...

- d) There are several methods that Worldwide Communications can choose to set the transfer price. How does the choice of a transfer price affect the operating profits of both divisions involved in an inter-company transfer? Discuss.

(3 marks)

- e) Explain three (3) goals of a transfer pricing system in a decentralized organization.

(6 marks)

(Total 25 marks)

QUESTION 3

Epson Electronics Sdn Bhd produces earphones for electronic devices such as laptops and handphones. It is an electrical device worn on the ear to receive radio or telephone communications or to listen to music on these devices. Due to the rapid rate of technological innovations in this market segment, most of the company's product have short-life cycles.

The Marketing Manager believes new product introductions are the key to the company's success. However, the Managing Director is concerned that frequent changes in product line is eroding the company's profitability. He believes that many of the new products have such short life cycles that they do not fully recover the cost. He has asked the management accountant to review the profitability of one of its products, E101, which has been phased out after only 3 years in the market.

The data for E101 on the sales and manufacturing cost for the past 3 years is as follows:

Sales price per unit	RM 15.00
Unit Sales per year:	
Year 1	5,000
Year 2	9,500
Year 3	3,500
Unit Manufacturing cost:	
Direct Material	RM 3.00
Direct Labor	RM 1.50
Applied Manufacturing overhead	RM 2.25

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In addition to these manufacturing costs, the management accountant was able to extract the following costs associated with E101:

	Year 0 RM	Year 1 RM	Year 2 RM	Year 3 RM
Research & Development cost	19,000			
Product Design	12,000			
Process Design	17,000	10,000	8,000	
Tooling cost	22,000			
Marketing Cost	11,000	12,000	6,000	8,000
Warranty claims		10,000	4,000	1,000
After-sales services		3,000	5,500	2,000

Required:

- a) Assess the profitability of product E101 by computing the gross margin for Year 1, 2 & 3. Was product E101 profitable?

(4.5 marks)

- b) Assess the profitability of E101 based on its entire life cycle cost. Was product E101 profitable?

(9.5 marks)

- c) If the company's policy required a target profit margin on sales for all new products of at least 30% of sales, calculate the target cost of E101.

(3 marks)

- d) What is the average unit cost of E101 over its entire life cycle? Based on this, do you think the management of Epson Electronics Sdn Bhd would have developed product E101?

(4 marks)

- e) Would you recommend Epson Electronics Sdn Bhd to use life cycle costing (budgeting) to evaluate new product introduction in the future? Explain your answer.

(4 marks)

(Total 25 marks)

Continued...

QUESTION 4**Part A**

Latif is an accounting major at a Cyberjaya university located approximately 40 kilometers from Kuala Lumpur. Many of the students attending the university are from the metropolitan area and visit their homes regularly over the weekends. Latif, an entrepreneur at heart, realizes that few good commuting alternatives are available for students doing weekend travel. He believes that a weekend commuting service could be organized and run profitably from several suburban and downtown shopping mall locations. Latif has gathered the following investment information.

- Five used vans would cost a total of RM75,000 to purchase and would have a 3-year useful life with negligible residual value. Latif plans to use straight-line depreciation.
- Ten drivers would have to be employed at a total annual payroll expense of RM48,000.
- Other annual out-of-pocket expenses associated with running the commuter service would include Gasoline RM16,000, Maintenance RM3,300, Repairs RM4,000, Insurance RM4,200, and Advertising RM2,500.
- Latif has visited several financial institutions to discuss funding. The best interest rate he has been able to negotiate is 16%. Use this rate for cost of capital.
- Latif expects each van to make ten round trips weekly and carry an average of six students each trip. The service is expected to operate 30 weeks each year, and each student will be charged RM12.00 for a round-trip ticket.

(Note: Discount rate for 16% can be obtained by referring to the tables in page 9)

Required:

- a) Determine the annual (1) net income, and (2) net annual cash flows for the commuter service.
(6 marks)
- b) Compute (1) the payback period, and (2) the annual rate of return.
(4 marks)
- c) Compute the net present value of the commuter service. (Round to the nearest RM)
(3 marks)
- d) What should Latif conclude from these computations?
(4 marks)

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PART B

Dahari Denim uses backflush costing to account for production costs of its clothing line. During August 2020, the firm produced 150,000 garments and sold 149,000. The standard cost for each garment is:

	<u>RM</u>
Direct material	2.00
Conversion cost	4.00
Total cost	6.00

The firm had no inventory on 1 August 2020. The following events took place in August:

- Purchased RM302,000 of direct material
- Incurred RM608,000 of conversion costs
- Applied RM600,000 of conversion costs
- Finished 150,000 garments
- Sold 149,000 garments for RM10 each

Required:

Prepare journal entries using backflush costing for 3 trigger points (purchase, completion of finished goods, sale of finished goods) including the disposal of under-allocated or over-allocated conversion cost.

(8 marks)

(Total 25 marks)

(Grand Total 100)

Continued...

Present Value of \$1.00

$$P = \frac{S}{(1 + r)^n}$$

In this table $S = \$1.00$.

Periods	2%	4%	6%	8%	10%	12%	14%	16%	18%
1	0.980	0.962	0.943	0.926	0.909	0.893	0.877	0.862	0.847
2	0.961	0.925	0.890	0.857	0.826	0.797	0.769	0.743	0.718
3	0.942	0.889	0.840	0.794	0.751	0.712	0.675	0.641	0.609
4	0.924	0.855	0.792	0.735	0.683	0.636	0.592	0.552	0.516
5	0.906	0.822	0.747	0.681	0.621	0.567	0.519	0.476	0.437
6	0.888	0.790	0.705	0.630	0.564	0.507	0.456	0.410	0.370
7	0.871	0.760	0.665	0.583	0.513	0.452	0.400	0.354	0.314
8	0.853	0.731	0.627	0.540	0.467	0.404	0.351	0.305	0.266
9	0.837	0.703	0.592	0.500	0.424	0.361	0.308	0.263	0.225
10	0.820	0.676	0.558	0.463	0.386	0.322	0.270	0.227	0.191

Present Value of Annuity \$1.00 in Arrears*

$$P_n = \frac{1}{r} \left[1 - \frac{1}{(1 + r)^n} \right]$$

Periods	2%	4%	6%	8%	10%	12%	14%	16%	18%
1	0.980	0.962	0.943	0.926	0.909	0.893	0.877	0.862	0.847
2	1.942	1.886	1.833	1.783	1.736	1.690	1.647	1.605	1.566
3	2.884	2.775	2.673	2.577	2.487	2.402	2.322	2.246	2.174
4	3.808	3.630	3.465	3.312	3.170	3.037	2.914	2.798	2.690
5	4.713	4.452	4.212	3.993	3.791	3.605	3.433	3.274	3.127
6	5.601	5.242	4.917	4.623	4.355	4.111	3.889	3.685	3.498
7	6.472	6.002	5.582	5.206	4.868	4.564	4.288	4.039	3.812
8	7.325	6.733	6.210	5.747	5.335	4.968	4.639	4.344	4.078
9	8.162	7.435	6.802	6.247	5.759	5.328	4.946	4.607	4.303
10	8.983	8.111	7.360	6.710	6.145	5.650	5.216	4.833	4.494

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